

## **MEDIA TYPE IDENTIFICATION**

### **CROSS REFERENCE TO RELATED APPLICATIONS**

The entire contents and disclosures of co-pending U.S. Patent Application Serial No. 10/197,044, titled "Generic Value Bearing Item Labels", filed July 16, 2002, to be commonly assigned, which is a continuation-in-part of U.S. Patent Application Serial No. 09/975,532, filed October 10, 2001, entitled "SYSTEM AND METHOD FOR PROVIDING COMPUTER-BASED POSTAGE STAMPS" which claims the benefit of U.S. Provisional Application No. 60/239,424 filed Oct. 10, 2000, entitled "A SYSTEM AND METHOD FOR PROVIDING COMPUTER BASED POSTAGE STAMPS" are hereby expressly incorporated by reference for all purposes as if fully set forth herein.

The entire contents and disclosures of co-pending U.S. Patent Application Serial No. 09/905,329, filed July 13, 2001, entitled "WEB-ENABLED VALUE BEARING ITEM PRINTING" and co-pending U.S. Patent Application Serial No. 09/585,025, filed Jun. 1, 2000 and entitled "ON-LINE VALUE BEARING ITEM PRINTING", to be commonly assigned, are hereby expressly incorporated by reference for all purposes as if fully set forth herein.

### **FIELD OF THE INVENTION**

The field of the present invention is printing of value bearing items, and more particularly, identifying media type to a system for printing of value bearing items.

### **BACKGROUND OF THE INVENTION**

Value Bearing Items ("VBI") include among other things, postage, coupons, tickets, gift certificates, currency, money orders, vouchers and the like. U.S. Patent Application Serial No. 09/975,532 entitled "SYSTEM AND METHOD FOR PROVIDING COMPUTER-BASED POSTAGE STAMPS" (hereinafter referred to as the "Generic VBI Invention"), the contents and disclosures of which are incorporated in full herein, discloses systems and methods for the creation of

1 generic VBI postage, such that no intended recipient address need be specified,  
2 verified or indicated in any way on the created postage. The systems and  
3 methods disclosed in the Generic VBI Invention provided for the generation and  
4 printing of generic VBI, such as postage, that may be used at any time for any  
5 recipient, much like pre-printed postage printed and sold by the United States  
6 Postal Service ("USPS"). The term "generic postage" as used herein refers to  
7 postage that is non-recipient specific and/or non-date specific.

8         The Generic VBI Invention disclosed a user interface via which a user  
9 could enter postage specifications, such as a mail class and an amount. Some  
10 generic Value Bearing Items (VBI) systems provide a user with an option of  
11 media type, such as various multi-part label sets, on which to print the particular  
12 generic VBI indicia, such as generic postage indicia. For example, a computer-  
13 based generic VBI system could provide alternative selections of single-feed  
14 sheet labels and label rolls, such as through a user interface display screen drop-  
15 down menu.

16         Media type is the type of physical media on which something, in this case,  
17 VBI, is to be printed. A particular-dimensioned envelope is a media type. A  
18 particular-dimensioned card is another media type. A particular-dimensioned  
19 piece of paper is yet another media type. Various label manufacturers could  
20 provide distinct multi-part label set configurations, each label set configuration  
21 being yet another media type. Further still, single-part label set configurations  
22 could provide distinct label dimensions and spatial relationships between labels.

23         Each media type may have particular formatting requirements. For  
24 example, spatial relationships between components of what is to be printed, e.g.,  
25 VBI, could vary from one media type to another. As another example, spatial  
26 relationships between components of what is to be printed, e.g., VBI, and the  
27 dimensions of the media type on which it is to be printed, could vary from one  
28 media type to another. That is, for a first distinct single-part label set  
29 configuration, a bar code may need to be printed in a particular location on each  
30 label of the particular label set. If a second single-part label set configuration  
31 were used, using the format for the first distinct label set configuration to print the

1 bar code on the second single-part media type could result in the bar code being  
2 printed in a position outside, or partially outside, of the perimeter of a particular  
3 label.

4 Therefore, before printing VBI, a user needs to identify to, in an example  
5 case, the generic Value Bearing Items (VBI) system, the particular media type on  
6 which to print. One way that media type selection is identified to a system is by  
7 selecting from a list of available media types supported by the particular system.  
8 Sometimes, lists of available media types are identified with graphic icons and/or  
9 text. Once a user has identified to a system a particular media type on which to  
10 print, the system, e.g. the generic VBI system, can then generate the information  
11 to be printed, e.g., generic VBI indicia, in a format corresponding to the particular  
12 media type selected.

13 The term "form factor" is sometimes used herein to refer to an indicator, or  
14 identifier, of a particular media type.

15 As manufacturers make new media types on which to print information  
16 such as VBI, or generic VBI indicia, a system for printing such information, e.g., a  
17 generic VBI system, will need to add each new form factor to the respective user  
18 interface media type selection feature. As more and more manufacturers make  
19 media types on which to print generic VBI indicia, the list of available and  
20 supported form factors/media types will become increasingly longer.

21 Some VBI systems, such as computer-based generic VBI systems, use  
22 graphic icons and/or text to identify each media type available and supported by  
23 the particular system. A list of available and supported media types/form factors  
24 may be presented, for example, in a pull-down menu. As will be understood by  
25 someone with ordinary skill in the art, a pull-down menu on any particular user  
26 interface display screen is limited in space. As the list of available and supported  
27 form factors becomes increasingly longer, some VBI systems decrease the size  
28 of displayed graphic icons and/or text in order to accommodate the limited  
29 display space of online user interface displays. The smaller the graphic icon  
30 and/or the shorter the descriptive text, and the longer the list of available media  
31 type options, the more confusing, inconvenient, and/or time-consuming it can be

1 for a user to identify and select the appropriate media type/form factor from the  
2 list.

3 A better way of indicating the media type identification to a computer-  
4 based VBI system is needed.

## 6 **SUMMARY OF THE INVENTION**

7 The exemplary embodiment of the present invention provides methods  
8 and systems for automatically selecting a media type for which to format Value-  
9 Bearing Item indicia based on a user's input of a secured paper control number.

10 The exemplary embodiment of the present invention provides a method  
11 for selecting a media type format for which to generate value-bearing item  
12 indicia, said method comprising receiving an input of a secured paper control  
13 number, and identifying a media type format corresponding to the secured paper  
14 control number.

15 The exemplary embodiment of the present invention provides a method  
16 for determining a media type for a particular unit of secured paper, said method  
17 comprising receiving an input of a media type identifier, wherein the media type  
18 identifier is displayed on the particular unit of secured paper, and retrieving from  
19 a memory storage a record corresponding to the media type identifier, wherein  
20 said record defines a media type format corresponding to the media type  
21 identifier.

22 The exemplary embodiment of the present invention provides a method  
23 for identifying to a system a secured paper media type, said method comprising  
24 displaying on a particular unit of secured paper a secured paper identifier  
25 wherein the particular unit of secured paper corresponds to a particular media  
26 type, said media type characterized by a set of media type information, and  
27 recording on a database a relationship between the secured paper identifier and  
28 the corresponding media type information.

**BRIEF DESCRIPTION OF THE DRAWINGS**

These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings in which:

FIG. 1 is a block diagram depicting an exemplary Internet client/server environment used by an exemplary on-line postage system embodiment of the present invention;

FIG. 2 is a high-level flow diagram depicting high level functionality of the exemplary operation of an exemplary system for generating generic postage in an exemplary embodiment of the present invention;

FIG. 3 is a graphic representation depicting a screen shot of an exemplary generic postage printing user interface in an exemplary embodiment of the present invention;

FIG. 4 is a plan view of an exemplary generic postage stamp in an exemplary embodiment of the present invention;

FIG. 5 is a plan view of an alternative exemplary generic postage stamp in an alternative exemplary embodiment of the present invention;

FIG. 6 is a graphic representation depicting a first screen shot of an alternative exemplary generic postage printing user interface in an exemplary embodiment of the present invention;

FIG. 7 is a graphic representation depicting a second screen shot of an alternative exemplary generic postage printing user interface in an exemplary embodiment of the present invention;

FIG. 8 is a high level flow diagram depicting high level functionality of an exemplary client side WYSIWYG interface of the present invention and certain interactive functions with the alternative exemplary server side of the present invention; and

FIG. 9 is a high level flow diagram depicting high level functionality of an alternative exemplary client side WYSIWYG interface of the present invention and certain interactive functions with the alternative exemplary server side of the

1 present invention in which only a designated leading number of digits of a user-  
2 supplied master serial number are used to identify a media label type.

3  
4 **DETAILED DESCRIPTION OF THE INVENTION**

5 The exemplary embodiment of the present invention is provided by an  
6 exemplary computer-based, software-based, online postage system. However, it  
7 will be understood by someone with ordinary skill in the art that the present  
8 invention may be implemented by a variety of generic postage metering systems  
9 in accordance with a variety of print requirements promulgated by postal systems  
10 around the world. Further, although an exemplary operation of the present  
11 invention is described below in accordance with USPS requirements for PC-  
12 based postal printing, the present invention is not limited to applications in  
13 accordance with the USPS requirements. Rather, the present invention is equally  
14 applicable for operation in all PC postage printing and VBI indicia printing  
15 systems.

16 Computer-based, software-based, on-line postage systems are now well-  
17 known in the art. An example software-based, on-line postage system is  
18 described in U.S. Patent Application Serial No. 09/163,993 filed on September  
19 29, 1998, entitled "On Line Postage System", the contents of which are hereby  
20 incorporated by reference for all purposes as if fully set forth herein. As therein  
21 disclosed, an exemplary on-line postage system software comprises user code,  
22 also sometimes referred to as client software, that resides on each client system  
23 accessing an on-line postage enabled server system; controller code resides on  
24 the on-line postage-enabled server system. An exemplary on-line postage  
25 system may comprise a user/client system electronically connected to a server  
26 system, which in turn is connected to a USPS system. The server system is  
27 preferably capable of communicating with one or more client systems  
28 simultaneously.

29 In order to print VBI indicia, such as postage stamps, using an exemplary  
30 software-based on-line VBI indicia system, a user first registers (user registration  
31 is typically a one-time event, but would not necessarily be so) with the system; in

1 the case of postage, the user obtains a license from the USPS to print postage.  
2 In operation, a licensed and registered client of the on-line postage system sends  
3 a request for authorization to print a desired amount of postage. A postal security  
4 device (PSD) server determines whether the client's account balance is sufficient  
5 to cover the requested amount of postage, and if so, communicates an  
6 authorization to the client system. The client system then sends image  
7 information for printing postal indicium for the granted amount to a printer so that  
8 the postal indicium is printed on the print media, such as for example a label.  
9 Once the postage information is printed on an individual label it may be  
10 subsequently placed on an individual mail piece with a recipient of the users  
11 choosing and mailed and processed by the USPS.

12 In one embodiment, the PSD server provides an ascending register ("AR")  
13 that records the amount of postage that is dispensed or printed on each  
14 transaction and a descending register ("DR") that records the value or amount of  
15 postage that may be dispensed and decreases the amount remaining from an  
16 original amount by a charged amount as postage is printed. An exemplary PSD  
17 may further include a device ID, indicia key certificate serial number, licensing  
18 ZIP code, key token for the indicia signing key, date and time of last transaction,  
19 a last challenge received from the client, an operational state of the PSD,  
20 expiration dates for keys, a passphrase repetition list and the like.

21 FIG. 1 is a block diagram depicting an exemplary Internet client/server  
22 environment used by an exemplary on-line postage system embodiment of the  
23 present invention. As depicted in FIG. 1, clients 10a-10n and servers 20a – 20m  
24 engage in two-way communication over a suitable communication network 12. In  
25 one embodiment, communication network 12 comprises the Internet. It will be  
26 understood by those skilled in the art that the communication network may take  
27 many different forms, such as a local area network (LAN), wide area network  
28 (WAN), wired telephone network, wireless network, or any other network that  
29 supports data communication between respective entities.

30 The clients 10a-10n may take many different forms, and in one illustrative  
31 embodiment comprise personal computers and printer, with the personal

1 computers being linked to a PSD. Alternatively, the clients 10a-10n may  
2 comprise computers or any other device that has processing capabilities and that  
3 may engage in communication over communication network 12. Clients 10a-10n  
4 may be connected to the communication network 12 through communication  
5 links 14a-14n. In addition, each client preferably has access to a printer such as  
6 printer 16. Optionally, a local network 18 may serve as the connection between  
7 some of the clients, such as the PC 10a and the Internet 12. Servers 20a-20m  
8 are also connected to the Internet 12 through respective communication links.

9       The exemplary system utilizes special paper label stock to protect against  
10 the fraudulent production of generic postage stamps. Such special paper label  
11 stock may be available through a generic VBI service provider, through retail  
12 outlets or other sources. In one embodiment of label stock, multiple labels are  
13 placed on a single large set (sheet or roll) of label stock. The multiple labels may  
14 be arranged in any fashion. In one embodiment of a label sheet, the labels are  
15 arranged in a rectilinear grid pattern. In another embodiment of label stock,  
16 multiple labels are arranged in a linear fashion placed on a roll of label stock.

17       In the exemplary embodiment, a master serial number is used to track the  
18 production, distribution, and use of a particular unit of label stock.

19       In the exemplary embodiment, a unique control number, herein sometimes  
20 referred to as a serial number, uniquely identifies each label used to generate a  
21 postage stamp. Each such serial-number-controlled postage label is referred to  
22 herein as a Postagio label. Paper stock, such as label stock, controlled with  
23 serial numbers, is sometimes referred to herein as secured paper. As will be  
24 understood by someone with ordinary skill in the art, serial-number-controlled  
25 label and paper stock is not limited to Postagio labels. Other non-limiting  
26 examples of secured paper controlled using serial numbers include check stock.

27       In the exemplary embodiment, the Postagio serial number comprises a 9-  
28 digit numeric master Serial Number that applies to the particular unit of label  
29 stock and a 3-digit numeric minor label extension that, in combination with the  
30 master serial number, uniquely identifies the particular Postagio label. The two  
31 numbers are visually separated by a point, or period.



1 In an alternative exemplary embodiment, Postagio label serial numbers  
2 are alphanumeric serial numbers, generated from a 28-character set. The  
3 alphanumeric serial numbers will be broken up visually for the customer to  
4 reduce data entry errors. The master serial number will contain a checksum  
5 value and will help prevent incorrect sheet values.

6 FIG. 2 is a high-level flow diagram depicting high level functionality of the  
7 exemplary operation of an exemplary system for generating generic postage in  
8 an exemplary embodiment of the present invention. As depicted in FIG. 2, a user  
9 first enters 100 a request to print the desired postage. The exemplary software-  
10 based on-line generic postage system provides a user interface comprising a  
11 plurality of user interface input screens via which a user may specify and print  
12 generic postage stamps for use with one of a plurality of postage classes,  
13 including standard first class service as well as other specialty services. For  
14 example, an exemplary user interface input screen such as the one depicted in  
15 FIG. 3, provides wizard-based prompts to assist users in determining the  
16 type/class of postage to print. In addition, a second interface is provided that  
17 allows customers to simply enter the postage rate and print generic postage  
18 stamps.

19 Referring again to FIG. 2, in the exemplary embodiment, the indicia  
20 generation process determines 130 whether a print wizard was used to generate  
21 the request to print generic postage stamps. If a print wizard was used to  
22 generate the request, the class selected within the wizard will be the class  
23 included in the generic postage stamps. If the wizard was not used, the rate class  
24 will default to first class. In the exemplary embodiment, a user may select any  
25 denomination of postage desired, up to the maximum limit defined by the PCIBI-  
26 O, that is currently \$999.99.

27 As depicted in FIG. 2, the exemplary system then determines 132 the  
28 label serial number. One way in which the label serial number is determined is  
29 by way of a master serial number entered by a user.

30 Continuing with reference to FIG. 2, in the exemplary embodiment, master  
31 serial numbers and pre-printed serial numbers are tracked 135 by the server.

1 When a unit of label stock has been used, the server flags the meter number that  
2 used label stock associated with the master serial number. If the user prints  
3 generic postage stamps on a portion of label stock, the user will be able to print  
4 indicia on the remaining labels included in the label stock at a later time.  
5 However, only the meter that initially used the label stock will be permitted to  
6 print the remaining labels.

7 Once all labels included in the label stock have been printed, the  
8 associated master serial number and preprinted serial numbers will be flagged,  
9 and any attempts to print a label using those serial numbers will be rejected by  
10 the server. In the exemplary embodiment, all possible serial numbers will not be  
11 initially activated. Rather, only label stock and labels having serial numbers that  
12 have been produced by a manufacturer and placed into distribution will be  
13 activated and available for use. Continuing with FIG. 2, a user may print 136  
14 postage or sample postage onto the label stock.

15 As depicted in FIG. 3, an exemplary user interface may include an input  
16 window 102 into which a user may enter postage information, such as for  
17 example, an amount, such as \$0.33 for first class stamps, in a free form. The  
18 user interface also includes a link 104 to a postage calculator that may be used  
19 to calculate postage for specialty services such as for example, Express mail.

20 As depicted in FIG. 3, the exemplary user interface provides a pull-down  
21 menu button 500 with which to identify a form factor 502 (the expanded pull-  
22 down menu is not shown). However, the exemplary system will use the form  
23 factor identification process described in more detail below to automatically  
24 identify the form factor 502 according to the master serial number 134 input by  
25 the user.

26 FIG. 6 is a graphic representation depicting a first screen shot of an  
27 alternative exemplary generic postage printing user interface in an exemplary  
28 embodiment of the present invention. FIG. 7 is a graphic representation  
29 depicting a second screen shot of an alternative exemplary generic postage  
30 printing user interface in an exemplary embodiment of the present invention. In  
31 the exemplary embodiment depicted in FIGS. 6 and 7, the exemplary system will

1 use the form factor identification process described in more detail below to  
 2 automatically identify the form factor 502 according to the master serial number  
 3 134 input by the user. Once the system has identified the form factor 502, the  
 4 system will generate an exemplary label preview 504 such as is depicted in  
 5 FIGS. 6 and 7.

6 As depicted in FIG. 7, in the case of sheet label stock, a sheet label  
 7 preview 504 is generated showing labels previously printed 610 as blank labels,  
 8 and showing labels available for printing 607. The sequence numbers 608 of the  
 9 printable labels on the sheet label stock are shown in the sheet label stock  
 10 display 504. Those labels that will not be printed are shown as blank labels 610.  
 11 The exemplary label preview 504 is displayed within the user interface confirming  
 12 the exemplary system's automatic selection of label stock based on the user's  
 13 input of the master serial number.

14 In the case of a roll label stock, the label preview 504 as depicted in FIG. 6  
 15 shows a single label available for print.

16 It will be understood by someone with ordinary skill in the art that other  
 17 system embodiments of the present invention may not provide any mechanism  
 18 for user input or selection of label stock, such as is provided in FIGS. 6 and 7  
 19 (e.g., pull-down menu button 500 with which to identify a form factor 502). Such  
 20 other system embodiments of the present invention would rely on the system to  
 21 select the form factor exclusively based on the user's input of a master serial  
 22 number.

23 FIG. 4 is a plan view of an exemplary generic postage stamp in an  
 24 exemplary embodiment of the present invention. When a user prints a generic  
 25 postage stamp such as one depicted in FIG. 4, the exemplary system prints a  
 26 serial number 212' on the non-label portion of the label stock; the exemplary  
 27 system imbeds the serial number as part of the 2D bar code printed on the  
 28 Postagio label.

29 The exemplary system prints generic postage, imbedding in the 2D bar  
 30 code a serial number that matches the pre-printed serial number (208' on FIG. 4)  
 31 on a particular Postagio label. As depicted in FIG. 4, an exemplary generic

1 Postagio label will include a pre-printed serial number 208'. The pre-printed serial  
2 number 208' is a unique number printed in the bottom left-hand margin of the  
3 label to identify the sheet source and the individual label. The exemplary system  
4 further includes the pre-printed serial number in the machine-readable data  
5 matrix barcode format 210 to ensure that the stamp is unique and for USPS  
6 authentication. In the alternative exemplary embodiment, a serial number will  
7 also be printed 212 (not pictured in FIG. 4, but see FIG. 5) at the time the  
8 Postagio is created. This printed serial number 212 (not pictured in FIG. 4, but  
9 see FIG. 5) will be printed directly above (to the left of) (or below (to the right of))  
10 the pre-printed serial number 208 as an added fraud deterrent. If the serial  
11 numbers 208 and 212 (not pictured in FIG. 4, but see FIG. 5) do not match each  
12 other and the serial number in the machine-readable data matrix barcode format  
13 210, then the generic postage is not valid.

14 FIG. 5 is a plan view of an alternative exemplary generic postage stamp in  
15 an alternative exemplary embodiment of the present invention. As depicted in  
16 FIG. 5, when a user prints a generic postage stamp, the alternative exemplary  
17 system prints a serial number 212 as part of the indicia directly above the pre-  
18 printed serial number 208 already pre-printed on the label. In the alternative  
19 exemplary embodiment, the printed serial number 212 is the same font and size  
20 as the pre-printed number 208 on the label. Such font and size similarity between  
21 the pre-printed serial number 208 and the printed serial number 212 allows for  
22 immediate visual comparison of the numbers by USPS personnel.

23 Returning to FIG. 2, in the exemplary embodiment, master serial numbers  
24 and pre-printed serial numbers are tracked 135 by the server. When a unit of  
25 label stock has been used, the server flags the meter number that used the label  
26 stock. If the user prints generic postage stamps on a portion of label stock, the  
27 user will be able to print indicia on the remaining labels included in the label stock  
28 at a later time. However, only the meter that initially used the label stock will be  
29 permitted to print the remaining labels. Once all labels included in the label stock  
30 have been printed, the associated master serial number and preprinted serial  
31 numbers will be flagged and any attempts to print a label using those serial

1 numbers will be rejected by the server. In the exemplary embodiment, all  
2 possible serial numbers will not be initially activated. Rather, only label stock and  
3 labels having serial numbers that have been produced by a manufacturer and  
4 placed into distribution will be activated and available for use. Continuing with  
5 FIG. 2, a user may print 136 postage or sample postage onto the label stock.

6 In the exemplary embodiment of a pre-printed serial number, a form factor  
7 identifier 208-1'/208-1 is included as part of the pre-printed serial number 208'.

8 In the exemplary embodiment, a form factor identifier 208-1' is included as the  
9 leading 2 digits in the pre-printed serial number (e.g., 208' on FIG. 4). In the  
10 alternative exemplary embodiment, the form factor identifier 208-1 is included as  
11 the leading 3 digits in the pre-printed serial number (e.g., 208 on FIG. 5). The  
12 preceding examples of leading digits in the pre-printed serial number comprising  
13 the form factor are non-limiting illustrations.

14 It will be understood by someone with ordinary skill in the art that various  
15 other numbering schemes could be used to identify media type within a master  
16 serial number. It will also be understood by someone with ordinary skill in the art  
17 that in some alternative exemplary embodiments, an identifier other than a  
18 secure paper serial number could be pre-printed on label stock; the identifier  
19 would be used to identify media type; information relating the identifier to the  
20 corresponding media type could be stored in the system and used to correlate an  
21 input of an identifier to a particular media type so that information to be printed  
22 could be properly formatted for the particular media type. Such an identifier  
23 could be a form factor, or could be a special or alphanumeric character that could  
24 be translated to a form factor.

25 It will be understood by someone with ordinary skill in the art that various  
26 manufacturers may provide generic VBI label sets according to the particular  
27 manufacturer's specifications. Each manufacturer's VBI label sets may differ  
28 from other manufacturers' generic VBI label sets in size, dimension and  
29 configuration (configuration including, for example, specific spatial relationships  
30 between labels in a set; specific spatial relationships between label sets; and

1 spatial relationships between labels/label sets and the stock on which the  
2 labels/label sets are provided)) features.

3 In the exemplary system embodiment of the present invention, a forms  
4 database (see element 1214, FIG. 8) will be provided that will identify, for each  
5 print media type (including each manufacturer's generic VBI label sets), media  
6 type information, which may include one or more of the following, but is not  
7 limited to, the size (including but not limited to the size of each label; the size of  
8 each label set; and the size of the stock on which the labels/label sets are  
9 provided), dimensions (of each label; of each label set; and of the stock on which  
10 the labels/label sets are provided) and configuration characteristics (e.g., specific  
11 spatial relationships between labels in a set; specific spatial relationships  
12 between label sets; and spatial relationships between labels/label sets and the  
13 stock on which the labels/label sets are provided) of the particular media type.

14 A Serial Number database (see element 1221, FIG. 8) will be provided  
15 that will identify, among other things, a print media type (form factor) for each  
16 master serial number for label stock that has been produced by a manufacturer  
17 and placed into distribution.

18 As described below in more detail with reference to FIG. 8, in response to  
19 a user entering a master serial number, the exemplary system will access the  
20 forms database to determine from the serial number a particular media type  
21 corresponding to the serial number. Once the exemplary system accesses the  
22 forms database and locates the forms database record corresponding to the  
23 particular media, the exemplary system of the present invention then uses the  
24 forms database media type information, such as size, dimension and  
25 configuration features information, to calculate a size and/or print location of the  
26 Data Matrix (or other barcode) for each particular generic postage stamp ordered  
27 by the user according to the media type dimensions for the selected media, and  
28 according to the user's particular printer device.

29 It will be understood by someone with ordinary skill in the art that the  
30 forms database could be located at any one of various places, including in the

1 client system, in memory, or, for example, the forms database could alternatively  
2 be accessed by the server system.

3 It will be also understood by someone with ordinary skill in the art that the  
4 forms and Serial database information could be maintained in a single database.

5 FIG. 8 is a high level flow diagram depicting high level functionality of an  
6 exemplary intuitively-based (WYSIWYG) client side user interface 1200 of the  
7 present invention and certain interactive functions with the exemplary server side  
8 1201 of the present invention.

9 It will be understood by someone with ordinary skill in the art that the  
10 depiction of particular functions being performed on the client side, or the server  
11 side, of the exemplary embodiment of the present invention is illustrative; further  
12 alternative structures for function performance are possible without departing  
13 from the spirit of the present invention.

14 As depicted in FIG. 8, the exemplary client side WYSIWYG user interface  
15 1200 receives the user input Serial Number 1101. In response to receiving the  
16 user input Serial Number 1101, the exemplary client side WYSIWYG user  
17 interface 1200 then instructs the server system to query the database 1221 of  
18 valid pre-printed serial numbers using the user input Serial Number 1101 as a  
19 key and get a record 1210 of information associated with the Serial Number  
20 1101.

21 In response to the instructions from the client side 1200, the server side  
22 1201 of the system reads the Serial Number Database 1221. If the server side  
23 1201 of the system finds a match of the input Serial Number 1101 on the Serial  
24 Number Database 1221, the server side 1201 of the system returns the record  
25 1222 of information from the Serial Number Database 1221 associated with the  
26 Serial Number 1101 to the client side 1200 WYSIWYG user interface. Serial  
27 Number Database record 1222 information includes, among other things, a  
28 media label type (form factor).

29 The client side 1200 tests 1211 to see if any record is found. If no record  
30 is found, then the client side 1200 displays 1212 an instructive error message to  
31 the user's display monitor. If the Server Side 1201 returns a record 1222, then

1 the client side 1200 uses the media label type from the returned Serial Number  
2 Record 1222 to select 1213 from a Label Type (Forms) Database 1214 a media  
3 label type format corresponding to the returned media label type.

4 The client side 1200 then generates 1215 a label stock preview display  
5 (see, e.g., 504, FIGS. 6 and 7) corresponding to the returned label format. In the  
6 exemplary embodiment, the exemplary client side 1200 displays 1219, such as in  
7 a media type window, e.g., 500 (see, e.g., FIGS. 3, 6, and 7) a text description  
8 502 (see, e.g., FIGS. 3, 6, and 7) of the media type corresponding to the returned  
9 label format with an icon representing the media type label format. The display  
10 1219 of a text description and/or icon is optional. The exemplary client side 1200  
11 then displays 1216 the label stock preview display (see, e.g., 504, FIGS. 6 and 7)  
12 to the user's display monitor, ending 1217 the initial display function of the  
13 alternative exemplary client side WYSIWYG user interface 1200.

14 In one embodiment of the present invention, the label stock preview  
15 display (see, e.g., 504, FIGS. 6 and 7) is interactive.

16 In an alternative embodiment, in order to identify the media type form  
17 factor 502, only a designated number of digits of the user-supplied master serial  
18 number are needed to identify a media label type – for example, a designated  
19 leading number of digits of the user-supplied master serial number comprise a  
20 media label type identifier. The preceding description of the designated number  
21 of digits being the leading number of digits of the user-supplied master serial  
22 number is illustrative and non-limiting. Alternatively, the designated number of  
23 digits of the master serial number would not necessarily need to comprise  
24 leading digits but could be digits located anywhere within the master serial  
25 number. FIG. 9 depicts high level functionality of an embodiment in which a  
26 designated leading number of digits of the user-supplied master serial number  
27 comprise a media label type identifier.

28 In the embodiment depicted in FIG. 9, the Forms Database 1214' records  
29 correlate a media label type identifier to a media label type format. As depicted  
30 in FIG. 9, in such an embodiment, once the user has entered the number of  
31 leading digits necessary to identify a media label type, the exemplary client side



WYSIWYG user interface 1200' receives the user input leading Serial Number digits 1101'.

In response to receiving the user input leading Serial Number digits 1101', the exemplary client side WYSIWYG user interface 1200' then instructs 1210' the server system 1201' to retrieve 1213' from the Forms Database 1214' a media label type format record 1218 corresponding to the user input leading Serial Number digits 1101'.

The client side 1200' tests 1211 to see if any media label type format record 1218 is found. If no media label type format record 1218 is found, then the client side 1200' displays 1212' an instructive error message to the user's display monitor. If the Server Side 1201 returns a media label type format record 1218, then the client side 1200' uses the media label type format record 1218 to generate 1215 a label stock preview display (see, e.g., 504, FIGS. 6 and 7) corresponding to the returned label format (1218).

In the alternative exemplary embodiment depicted in FIG. 9, the alternative exemplary client side 1200' displays 1219 a text description 502 (see, e.g., FIGS. 3, 6, and 7) of the media type corresponding to the returned label format (1218). The display 1219 of a text description and/or icon is optional. The alternative exemplary client side 1200' then displays 1216 the label stock preview display (see, e.g., 504, FIGS. 6 and 7) to the user's display monitor, ending 1217 the initial display function of the alternative exemplary client side WYSIWYG user interface 1200'.

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**ILLUSTRATIVE EMBODIMENTS**

Although this invention has been described in certain specific exemplary embodiments, many additional modifications and variations would be apparent to those skilled in the art. . For example, the present invention may be implemented by a variety of generic postage metering systems in accordance with a variety of print requirements promulgated by postal systems around the world. Further, although the operation of the present invention has been demonstrated in accordance with USPS requirements for PC based postal printing, the present invention is not limited to applications in accordance with the USPS requirements. Rather, the present invention is equally applicable for operation in various PC postal printing and Value Bearing Item indicia printing systems. It is, therefore, to be understood that this invention may be practiced otherwise than as specifically described. Moreover, to those skilled in the various arts, the invention itself herein will suggest solutions to other tasks and adaptations for other applications. Thus, the embodiments of the invention described herein should be considered in all respects as illustrative and not restrictive, the scope of the invention to be determined by the appended claims and their equivalents rather than the foregoing description.